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**Title: JP57072272A2: SOLID LITHIUM BATTERY AND ITS MANUFACTURE**

**Derwent Title:** Lithium solid electrolyte storage battery - has electrolyte thin layer of lithium iodide with high capacitance density [\[Derwent Record\]](#)

**Country:** JP Japan

**Kind:** A (See also: [JP63035069B4](#))

**Inventor:** KANDA MOTOI;  
YAMADA SHUJI;

**Assignee:** TOSHIBA CORP  
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**Published / Filed:** 1982-05-06 / 1980-10-24

**Application Number:** JP1980000148364

**IPC Code:** [H01M 6/18](#); [H01M 4/06](#); [H01M 4/50](#);

**Priority Number:** 1980-10-24 JP1980000148364

**Abstract:** PURPOSE: To obtain a battery which has a flat discharge characteristic and small voltage decrease at high voltage by constituting the battery by use of a negative lithium electrode, a positive electrode made of a mixture consisting of manganese dioxide and lithium iodide, and an electrolyte made of a thin lithium-iodide layer produced between the electrodes.

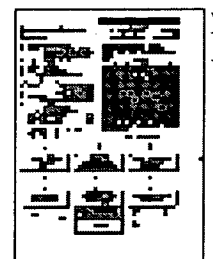
CONSTITUTION: A negative electrode 1 made of lithium metal or its alloy, a positive pellet 2 prepared from a mixture consisting of manganese dioxide and lithium iodide, and a solid electrolyte 3 made of a thin lithium iodide layer produced in the interface between these electrodes joined together are used in constituting a solid battery. For instance, a current collecting body is placed in a metal mold, a mixture consisting of manganese dioxide and lithium iodide is placed on the current collecting body, and the mixture is lightly pressed. A negative lithium-plate electrode and another current collecting body are placed over the former mixture, and a pressure of around 3t/cm<sup>2</sup> is applied on the current collecting body. After that, the battery is wired with a lead wire, and the entire battery is covered with paraffin, thus a solid battery is obtained. Consequently, a battery which has a flat discharge characteristic and small voltage decrease at high voltage can be obtained by improving the diffusion of lithium ions contained in the positive electrode.

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PDF	Patent	Pub.Date	Inventor	Assignee	Title
	US6586912	2003-07-01	Tsukamoto; Hisashi	Quallion LLC	Method and apparatus for amplitude limiting battery temperature spikes

Other Abstract Info: CHEMABS 097(12)100669W



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(11) Publication number: **57072**

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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **55148364**(51) Intl. Cl.: **H01M 6/18 H01M 4/06**(22) Application date: **24.10.80**

(30) Priority:

(43) Date of application  
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states:(71) Applicant: **TOSHIBA CORP**(72) Inventor: **KANDA MOTOI**  
**YAMADA SHUJI**

(74) Representative:

**(54) SOLID LITHIUM  
BATTERY AND ITS  
MANUFACTURE**

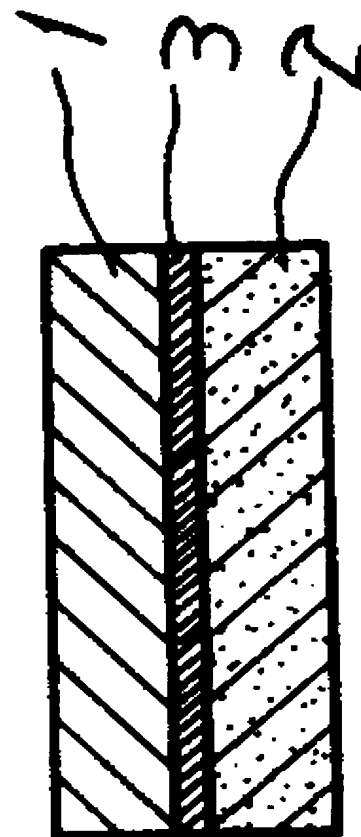
(57) Abstract:

**PURPOSE:** To obtain a battery which has a flat discharge characteristic and small voltage decrease at high voltage by constituting the battery by use of a negative lithium electrode, a positive electrode made of a mixture consisting of manganese dioxide and lithium iodide, and an electrolyte made of a thin lithium-iodide layer produced between the electrodes.

**CONSTITUTION:** A negative electrode 1 made of lithium metal or its alloy, a positive pellet 2 prepared from a mixture consisting of manganese dioxide and lithium iodide, and a solid electrolyte 3 made of a thin lithium iodide layer produced in the interface between these electrodes joined together are used in constituting a solid battery. For instance, a current collecting body is placed in a metal mold, a

mixture consisting of manganese dioxide and lithium iodide is placed on the current collecting body, and the mixture is lightly pressed. A negative lithium-plate electrode and another current collecting body are placed over the former mixture, and a pressure of around  $3\text{t/cm}^2$  is applied on the current collecting body. After that, the battery is wired with a lead wire, and the entire battery is covered with paraffin, thus a solid battery is obtained. Consequently, a battery which has a flat discharge characteristic and small voltage decrease at high voltage can be obtained by improving the diffusion of lithium ions contained in the positive electrode.

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